ELSEVIER

Volume 312, Numbers 1–2, 16 November 2000

Journal of ALLOYS AND COMPOUNDS

www.elsevier.com/locate/jallcom

Contents

Biography

Biography 1
Professor Hirohisa Uchida (Japan)

Physics

Structural studies of $CuAlSe_2$ and $CuAlS_2$ chalcopyrites at high pressures 4
R.S. Kumar (Coimbatore, India), A. Sekar, N.V. Jaya, S. Natarajan (Chennai, India) and S. Chichibu (Ibaraki, Japan)

Magnetic properties of the RCo_3Sn (R=Gd to Tm) compounds 9
J. Mudryk (Lviv, Ukraine), D. Fruchart, D. Gignoux (Grenoble, France), L.P. Romaka and R.V. Skolozdra (Lviv, Ukraine)

Crystallographic, magnetic and magnetocaloric properties of GdMgX intermetallic phases (X=Al, Ga, In) 12
F. Canepa, M.L. Fornasini, F. Merlo, M. Napoletano and M. Pani (Genova, Italy)

The hafnium aluminides $HfAl_3$ and Hf_2Al_3 studied by perturbed angular correlations with ^{181}Ta and ^{111}Cd probes 17
P. Wodniecki (Kraków, Poland and Göttingen, Germany), B. Wodniecka (Kraków, Poland), A. Kulińska (Kraków, Poland and Göttingen, Germany), M. Uhrmacher and K.P. Lieb (Göttingen, Germany)

Transformation of an electron spectrum in liquid ternary semiconductors 25
V. Sklyarchuk and Yu. Plevachuk (Lviv, Ukraine)

Chemistry

Peak-profile analysis of electroless nickel coatings 30
N.M. Martyak and K. Drake (King of Prussia, PA, USA)

Electron diffraction analysis of an AB_2-type Laves phase for hydrogen battery applications 41
Z. Shi, S. Chumbley and F.C. Laabs (Ames, IA, USA)

Synthesis, structural characterization and magnetic properties of $RCrO_4$ oxides, R=Nd, Sm, Eu and Lu 53
E. Jiménez, J. Isasi and R. Sáez-Puche (Madrid, Spain)

Dehydrogenation properties of nano-/amorphous Mg_2NiH_x by hydrogen induced mechanical alloying 60
T.-W. Hong, S.-K. Kim and Y.-J. Kim (Kyunggi-do, South Korea)

Influence of the boron additive on the structure, thermodynamics and electrochemical properties of the $MmNi_{3.55}Co_{0.75}Mn_{0.4}Al_{0.3}$ hydrogen storage alloy 68
H. Ye, H. Zhang, W.Q. Wu and T.S. Huang (Shanghai, PR China)

Chemical segregation during bulk single crystal preparation of Ni–Mn–Ga ferromagnetic shape memory alloys 77
D.L. Schlagel, Y.L. Wu, W. Zhang and T.A. Lograsso (Ames, IA, USA)

V–O thermochemistry from the pure metal to the monoxide 86
Y.S. Kim (Idaho Falls, ID, USA)

Crystal structure of metastable κ-$CeZrO_4$ phase possessing an ordered arrangement of Ce and Zr ions 94
H. Kishimoto, T. Omata, S. Otsuka-Yao-Matsuo (Suita, Japan), K. Ueda, H. Hosono and H. Kawazoe (Yokohama, Japan)

Thermal diffusivity measurement of uranium–thorium–zirconium hydride 104
B. Tsuchiya, J. Huang, K. Konashi, W. Saiki, T. Onoue (Ibaraki-ken, Japan) and M. Yamawaki (Tokyo, Japan)

Synthesis and photochemical properties of $Cd_{0.8}Zn_{0.2}S$ pillared $H_{1-x}Ca_{2-x}La_xNb_3O_{10}$ 111
Y. Fukugami and T. Sato (Sendai, Japan)

Elsevier Science B.V.

Metallurgy

Resistivity changes during hydrogenation of $Pd_{80}Ag_{20}$ alloy in non-equilibrium circumstances 117
J. Tóth (Budapest, Hungary), J. Garaguly (Zrinyi, Hungary), L. Péter and K. Tompa (Budapest, Hungary)

The isothermal section of the phase diagram of the La–Ni–Ti ternary system at 673 K 121
L. Jingqi and G. Ke (Guangxi, People's Republic of China)

{Sm,Er}–Cu–Sn ternary systems 124
I.V. Senkovska, Ya.S. Mudryk, L.P. Romaka and O.I. Bodak (L'viv, Ukraine)

Resistometric evidence of short-range order formation in the ternary $Au_{40}Ag_{40}Pd_{20}$ alloy 130
A.B. Ziya and T. Abbas (Multan, Pakistan)

The kinetics of a moving metal hydride layer 135
J. Bloch (Beer-Sheva, Israel)

Crystal structure of $Ce_3Ge_{1.11}In_{0.89}$ and related compounds 154
G. Nychyporuk, V. Zaremba, Ya. Kalychak (Lviv, Ukraine), J. Stepien-Damm and A. Pietraszko (Wroclaw, Poland)

Powder neutron diffraction study of $Nd_6Fe_{13}GaD_{12.3}$ with a filled $Nd_6Fe_{13}Si$-type structure 158
V.A. Yartys (Kjeller, Norway and Lviv, Ukraine), R.V. Denys, I.I. Bulyk (Lviv, Ukraine), R.G. Delaplane (Nyköping, Sweden) and B.C. Hauback (Kjeller, Norway)

Phase diagram of the Ca–Sn system 165
A. Palenzona, P. Manfrinetti and M.L. Fornasini (Genova, Italy)

Formation and crystal structure of ternary $Ce_5(M,Si)_3$ compounds, M=Ru,Rh 172
O. Sologub (Hiroshima, Japan), P. Salamakha (Ibaraki, Japan), G. Bocelli (Parma, Italy), C. Godart (Thiais, France) and T. Takabatake (Hiroshima, Japan)

Solubility and kinetic properties of deuterium in single crystal Pd 176
W.C. Chen and B.J. Heuser (Urbana, IL, USA)

Thermodynamic assessment of the Gd–Pd system 181
Z. Du and H. Yang (Beijing, China)

Crystal structure of the new quaternary phase $AgCd_2GaS_4$ and phase diagram of the quasi-binary system $AgGaS_2$–CdS 189
S.I. Chykhrij (L'viv, Ukraine), O.V. Parasyuk and V.O. Halka (Lutsk, Ukraine)

YbFeGe, a new structure type of equiatomic ternary germanides 196
O. Sologub (Higashi-Hiroshima, Japan), P. Salamakha (Higashi-Hiroshima, Ibaraki, Japan and Parma, Italy), G. Bocelli (Parma, Italy), S. Otani (Ibaraki, Japan) and T. Takabatake (Higashi-Hiroshima, Japan)

On the constitution and thermodynamics of Ni–La alloys 201
J. Dischinger and H.-J. Schaller (Kiel, Germany)

Study of the binary diffusion in liquid Sn–Pb and Al–Ge alloys by measurement of the melt concentration 211
R.A. Khairulin, S.V. Stankus and P.P. Bezverkhy (Novosibirsk, Russia)

Electronic effects of light impurities on edge dislocation motion in iron at T=0 K 219
Y.-Q. Feng and C.-Yu. Wang (Beijing, People's Republic of China)

Estimation of the excess entropy of mixing and the excess heat capacity of liquid alloys 228
V.T. Witusiewicz and F. Sommer (Stuttgart, Germany)

In situ investigation of stage of the formation of eutectic alloys in Si–Au and Si–Al systems 238
B. Bokhonov and M. Korchagin (Novosibirsk, Russia)

Materials Science

X-ray diffraction and differential scanning calorimetry investigations on high-pressure hydrogen gas charged Ti_3Al 251
D. Sornadurai (Bangalore, India), B.K. Panigrahi (Tamil Nadu, India), K. Shashikala, P. Raj (Mumbai, India), V.S. Sastry (Tamil Nadu, India) and Ramani (Bangalore, India)

An examination of the estimation method for the specific heat of TRU dioxides: evaluation with PuO_2 257
H. Serizawa and Y. Arai (Ibaraki-ken, Japan)

Study of the local environment during the phase decomposition of Fe–30.8Cr–12.2Co alloy by Mössbauer spectrometry 265
S. Alleg, B. Bouzabata (Annaba, Algeria) and J.M. Grenèche (Le Mans, France)

The effect of ternary addition on the formation and the thermal stability of $L1_2$ Al_3Zr alloy with nanocrystalline structure by mechanical alloying 273
K.I. Moon, K.Y. Chang and K.S. Lee (Seoul, South Korea)

Isothermal section of the Ti–Mn–Sn system and crystal structure of the $TiMnSn_4$ compound 284
A.V. Tkachuk, L.G. Akselrud, Yu.V. Stadnyk and O.I. Bodak (Lviv, Ukraine)

Lattice parameters of martensite in $Ti_{50.5-x}Ni_{49.5}Zr_{x/2}Hf_{x/2}$ quaternary shape memory alloys 288
S.F. Hsieh (Kaohsiung, Republic of China) and S.K. Wu (Taipei, Republic of China)

Effect of rapid solidification on microstructure of various $Fe_{29.5-x}Si_{70.5-x}$ ($0.0 \leq x \leq 3.7$) alloys 295
T. Nagase, I. Yamauchi and I. Ohnaka (Osaka, Japan)

Hydrogen absorption and electrode properties of $Zr_{1-x}Ti_xV_{1.2}Cr_{0.3}Ni_{1.5}$ Laves phases 302
D. Lupu, A.S. Biriş, A.R. Biriş, I. Mişan and E. Indrea (Cluj-Napoca, Romania)

Magnetic properties of an AISI 420 martensitic stainless steel 307
S.S.M. Tavares (Passo da Patria, Brazil and Grenoble, France), D. Fruchart, S. Miraglia and D. Laborie (Grenoble, France)

Synthesis and characterizations of ball-milled nanocrystalline WC and nanocomposite WC–Co powders and subsequent consolidations 315
M.S. El-Eskandarany, A.A. Mahday (Cairo, Egypt), H.A. Ahmed (Giza, Egypt) and A.H. Amer (Cairo, Egypt)

Thermoelectric properties of n-type $(Bi_2Se_3)_x(Bi_2Te_3)_{1-x}$ prepared by bulk mechanical alloying and hot pressing 326
J.Y. Yang, T. Aizawa (Tokyo, Japan), A. Yamamoto and T. Ohta (Ibaraki, Japan)

Book Review

Handbook of Magnetic Materials 331
C.J. Raub and S. Gmünd

Author Index of Volume 312 333

Subject Index of Volume 312 335

Guide for Authors I

Keyword list